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Creating the Wonder of 'Cocoon' 4

Without benefit of unbridled violence, gross-out humor or food fights — apparent prerequisites for contemporary boxoffice success — *Cocoon* seemed a decidedly tame entry into the summer flinggoing sweepstakes. Not to mention the fact that in these times of youth-oriented fare, its principal cast consisted largely of veteran performers well into their Social Security years. But in director Ron Howard's hands, the Zanuck/Brown production — with its predominant emphasis on character and heart — finished a strong third among the season's boxoffice attractions. Helping to create the magic behind what Howard jokingly dubbed *Close Encounters on Golden Pond* were the diversely-talented cinemagicians of Industrial Light and Magic, Cannom Creature Effects and Robert Short Productions who — separately and collectively — produced everything from lifelike mechanical dolphins to glowing extraterrestrials to flying saucers from distant worlds. *Article by Jody Duncan Shay.*

Backyard Adventures — Spielberg Style 38

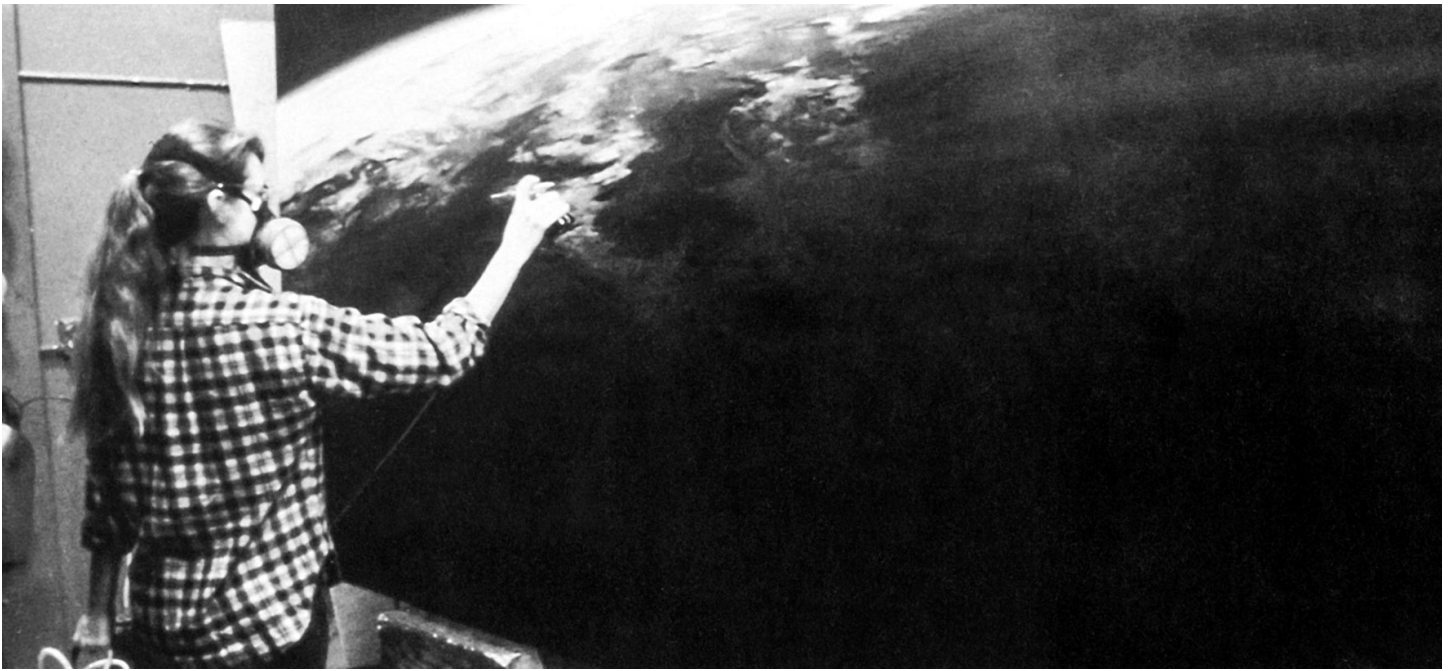
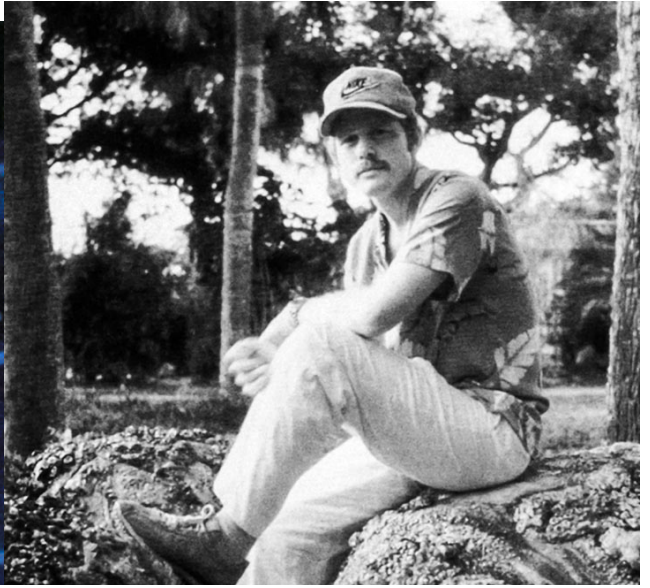
When Steven Spielberg's Amblin Productions first approached Industrial Light and Magic with a request to purvey the few, minimal effects shots needed for *The Goonies* and *Back to the Future*, the proposal seemed innocent enough. The premier facility was well-accustomed to orchestrating visual effects by the hundreds for Lucasfilm's intergalactic space epics. But the fast-paced, tandem production scheduling of Amblin's earthbound adventures called for some decidedly different approaches — and compelled the already well-occupied ILM staff into a whirlwind of productivity. And although neither *Goonies* nor *Back to the Future* is considered a 'major effects film,' each features several well-placed 'major effects.' Seasoned veterans of illusion Michael McAlister, Ken Ralston and other members of the ILM team — along with the films' special makeup experts — discuss life in the special effects fast lane and the ensuing challenges thereof. *Article by Janine Pourroy.*

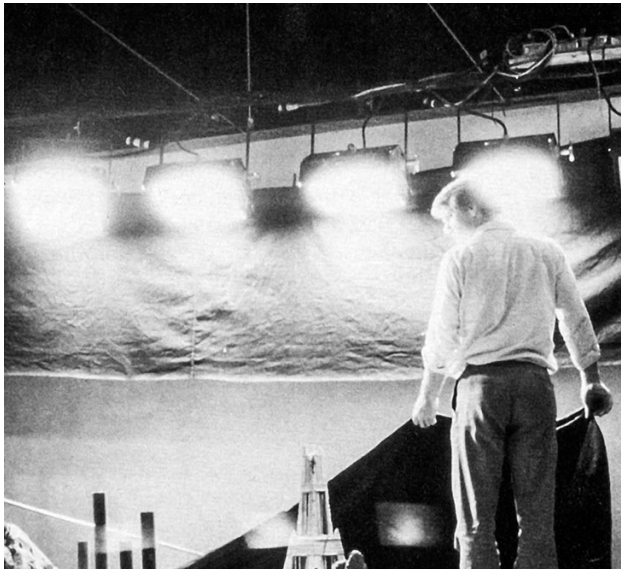
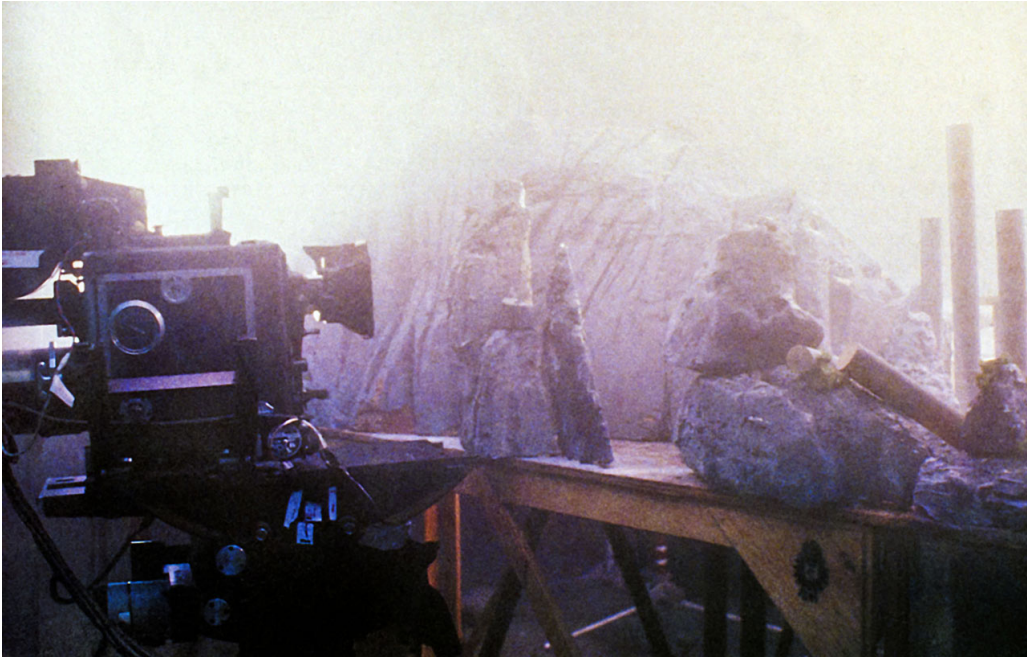
FRONT COVER — A benevolent alien reveals his true nature in *Cocoon*.
The Antarean rescue ship descends to earth in *Cocoon* — BACK COVER.

A dramatic scene from the movie Cocoon. A man is submerged in a swimming pool, with a large, intense fireball or explosion occurring directly above his head. The fireball is bright orange and yellow, with sparks and embers falling. The background shows a building with a large doorway and a mural of a ship. The scene is dimly lit, with the fire providing the primary light source. In the foreground, the back of a person's head is visible, looking towards the pool.

CREATING THE WONDER OF
COCOON







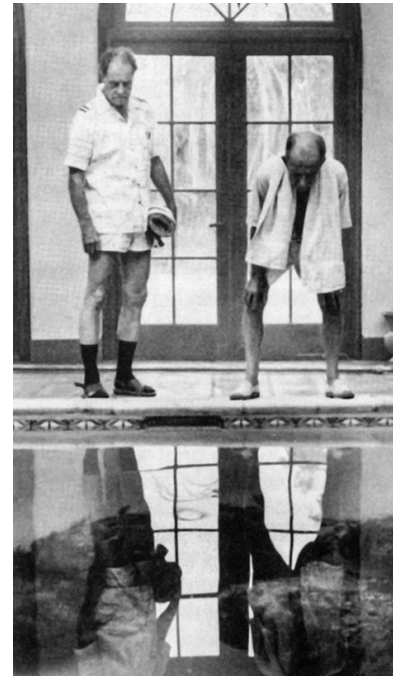
The aliens move into an estate located near a Florida retirement village. Soon after their arrival, bizarre-looking pods appear in the indoor pool where three elderly men (Don Ameche, Hume Cronyn and Wilford Brimley) are accustomed to stealing a daily swim. / In the ocean off the Bahamas, alien actor Brian Dennehy rigs a long-submerged cocoon for transport to the surface. / Cocoon creator Robert Short incorporated his own ideas with those of Ralph McQuarrie in devising a look for the Antarean life-support systems. / Although high-tech in concept, the cocoon interior was essentially shell-like in appearance. / The completed exterior resulted in an elegant reflection of Antarean aesthetics — an impression lost forever when it was realized that after 10,000

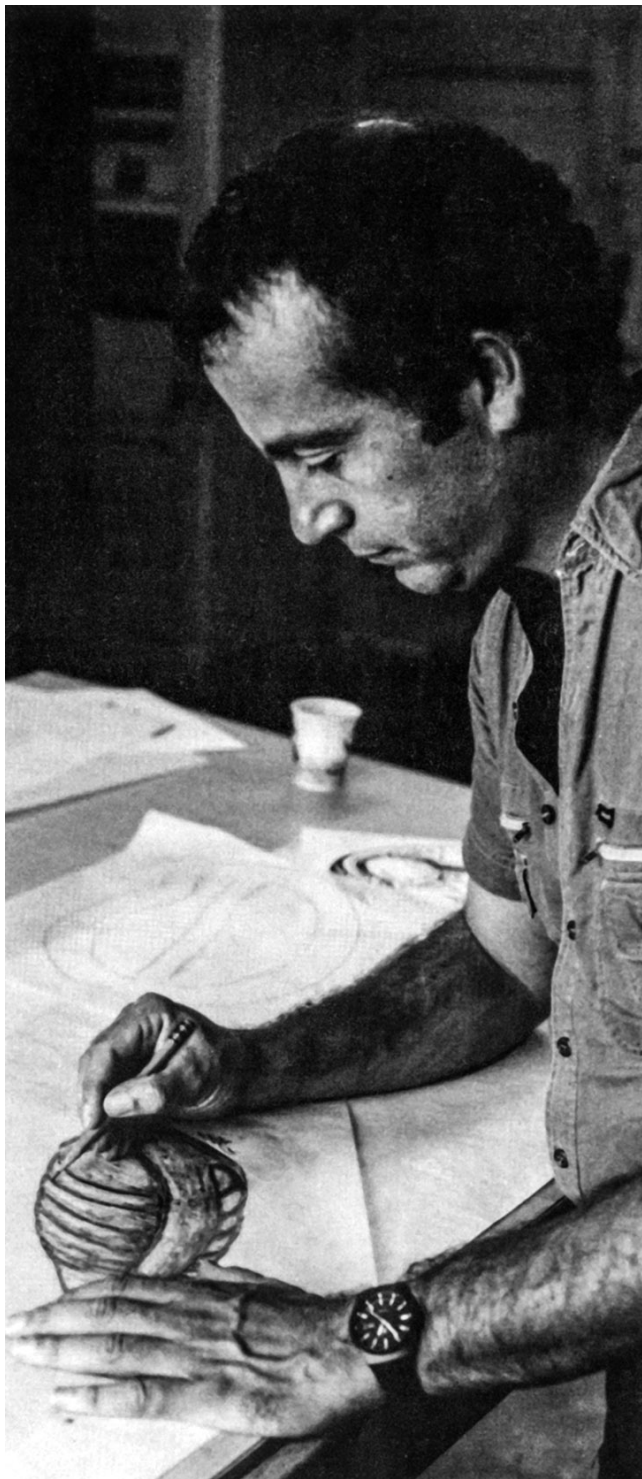
research places and discovered that it takes months, if not years, to train dolphins to that extent. And taking already trained dolphins out on location in Florida and the Bahamas was too risky — no matter how trained a dolphin is, put in the open sea, it will swim away. The only solution at the time seemed to be to shoot in the largest dolphin tank at Sea World, using a replica of the live-action boat and their trained dolphins, and hope that we could sell that tank as the Gulf of Mexico. That was the game plan early on. We knew even then, though, that we wouldn't be able to get all of our dolphin shots in the tank and that somewhere along the line we were going to need mechanical dolphins."

Short, experienced in creating underwater effects from his work in *Piranha* and *Splash*, was a logical choice to head up the construction of the mechanical dolphins. Choosing three eight-to nine-foot dolphins at Sea World's Florida facility as the prototypes for the mechanical replicas that would replace them in the live-action shoot, Short proceeded with their construction. The first step was to get a realistic life-cast — an impractical, if not impossible procedure to attempt with a live dolphin. Hoping it would not be necessary to build a dolphin from the ground up, Short began looking for an already existing dolphin sculpture from which he could pull his cast. Surprisingly, after calling research facilities all over the world — from the Natural History Museum in England to the Smithsonian to Sea World and Marineland — Short was unable to uncover a single suitable dolphin sculpture. "As funny as it sounds, I actually looked into the possibility of getting a life-cast off of a dead dolphin. But where do you find a dead dolphin? After calls to Sea World and Marineland, I learned of a guy who is licensed to pick up dead, exotic animals and reroute them to taxidermists and so forth. After dozens of phone calls, I finally got ahold of this guy and he said: 'If only you'd called me a month ago, I had an eight-foot dolphin in my freezer, but I just cut it up and fed it to my cats.'"

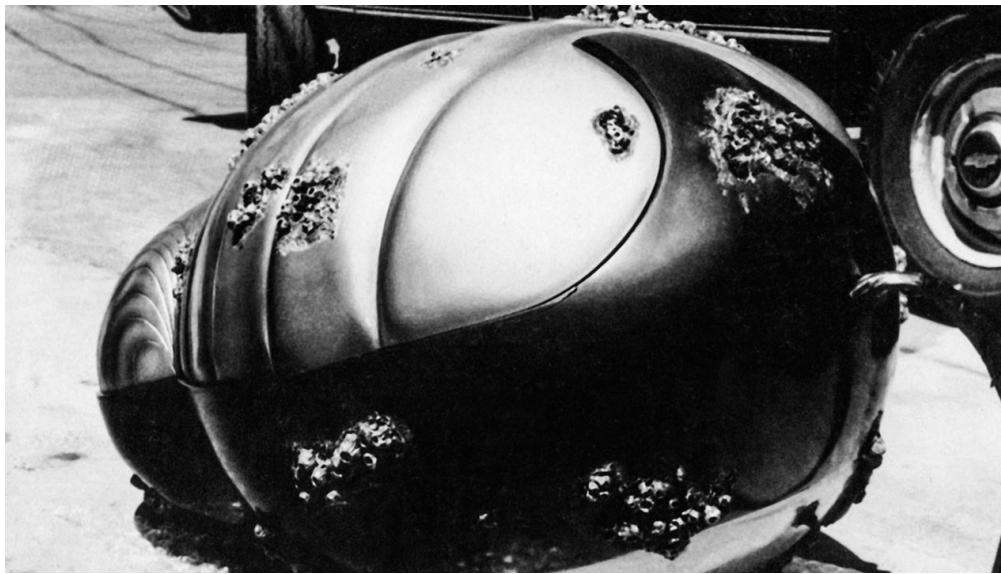
Making the decision at that point that his dolphins would have to be created from scratch, Short began pulling together a crew for the project. Donald Pennington was brought in as construction supervisor and Mike Hosch, who had sculpted the Star Child for *2010* and the Terror Dogs for *Ghostbusters*, was hired to produce the sculpture from which the mechanical dolphins would be made. Mechanics expert Bill Sturgeon, model-maker Jim McGeachy and production assistants Rob White and Michael Duvall rounded out the mechanical dolphin crew.

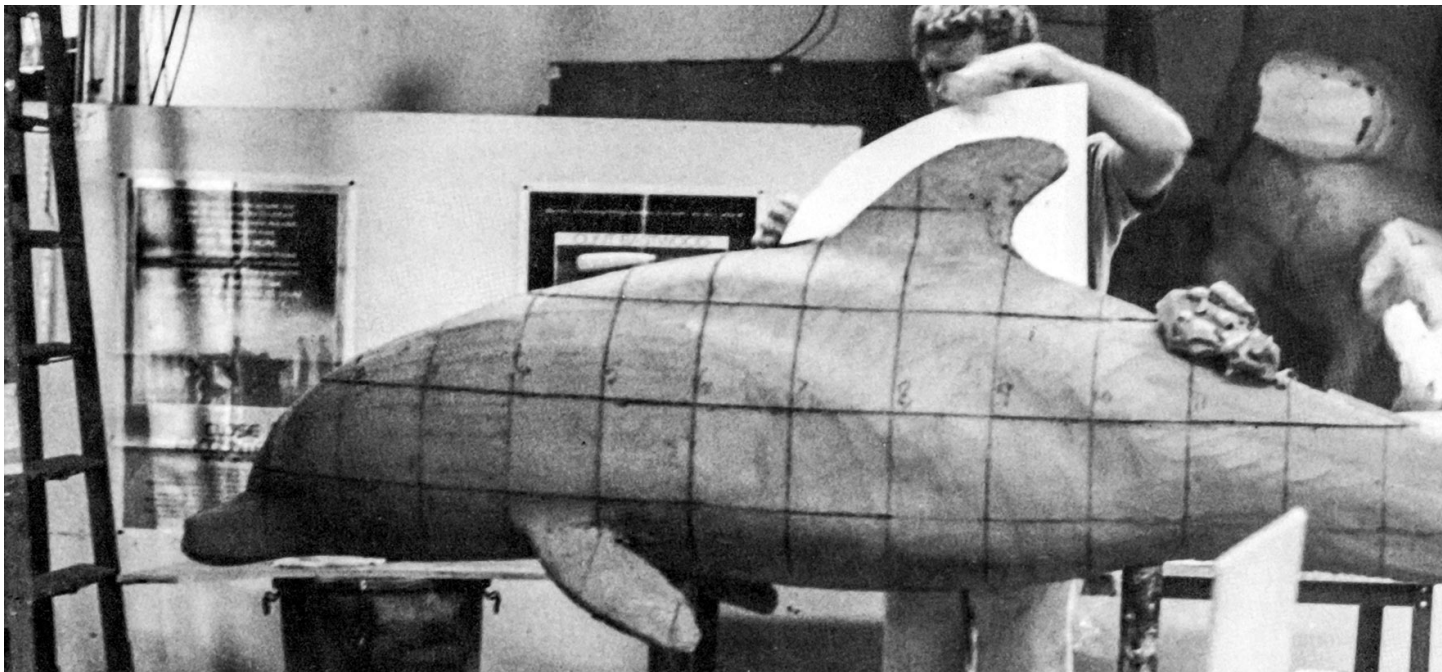
Sitting down with research photographs of the Sea World prototype dolphins, Hosch began the sculpting process by making graphs — basic blueprints for building a dolphin. Using the highly-detailed blueprints as a guide, he then sculpted a small, twelve-inch model. "We took urethane castings off of the twelve-inch model," Short explained, "and then we cut it up like





CINEFEX 2







Bob Short prepares a completed dolphin head for underwater testing. Ultimately, three heads of varying mechanical capabilities were constructed, with a fourth extracted from an unneeded full-sized backup model. / Scuba divers prepare their mechanical charges for an early scene in the film in which the dolphins form a circle and bark at a shaft of light emanating from the as yet unseen Antarean mothership. / The closeup dolphin head was completely mechanized and capable of cable-operated neck, mouth and eye movements. The animal's teeth were made from a flexible material to avoid potential problems created by imperfect registration, and the fragile Skinflex outercoat was carefully painted and then coated with urethane to protect the paint job and impart the natural sheen inherent to dolphin skin. / Seven live dolphins were also employed. And because Ron Howard was desirous of interaction between the authentic and fabricated

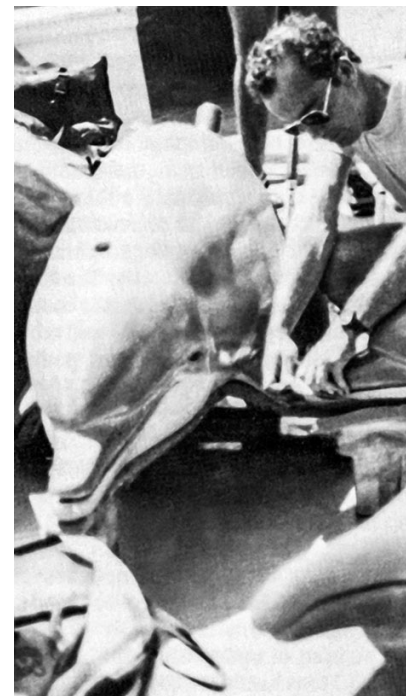
water." Two additional dolphin heads, capable only of mouth movement and controlled by levers, were also built. Equipped with buoyancy compensators, these heads could be used underwater at any depth, giving the divers controlling them more mobility. The fourth head — cut off of an extra full-bodied dolphin that was deemed unnecessary — had no mechanical capabilities at all and was used primarily as a background piece.

Interior mechanics for the various heads were designed by Bob Short, who also had to take into account the materials from which they would be made. Since the mechanisms had to function not only underwater, but in salt water, extra care was needed to insure that they were built sturdily and with essentially noncorrosive materials. "It was a very low-tech approach, but it was necessary," Short affirmed. "When you're out in the middle of Nassau, there's no machine shop you can run to if a cable breaks or a gimbal gives way. Bill Sturgeon and Don Pennington actually mechanized the heads, and I had to get them used to thinking in heavy terms. Bill especially was used to working on very intricate stuff, using fine aluminum pieces. I had him work in sturdier materials — wood and a heavier gauge aluminum — basically beefing the whole thing up so that an elephant could stand on it."

One recurring problem was the dolphin 'eyelids.' Though real dolphins don't have an actual lid, the tissue around the eye squeezes shut and Short developed a mechanical device that replicated the movement. Through repeated use, the Skinflex broke away from the device, requiring constant reattachment. Since the material would eventually break down — with no means to patch it — the eye area was carefully watched and, fortunately, remained intact until the end of filming.

Two fiberglass dolphin backs — required for shots of the dolphins just breaking water — completed the man-made dolphin fleet. "We did a lot of testing of the dolphins in Marina del Rey," Short recalled. "Being a scuba diver, I have a pretty good idea of how things work in the water and I had used that in designing the way the dolphins were built and what they looked like. On a tight schedule like this one, you really have to know what you are doing as you walk into the project. But it's still just theory. So when we threw one of the dolphin heads out in the marina and it actually worked, it was a cause for celebration because it validated all the theories on paper. We had been worried that we would drop this thing in the ocean and it would sink to the bottom, or that the back half of it would pop out of the water. Fortunately, it all worked out."

Further tests conducted in the surf near the St. Petersburg



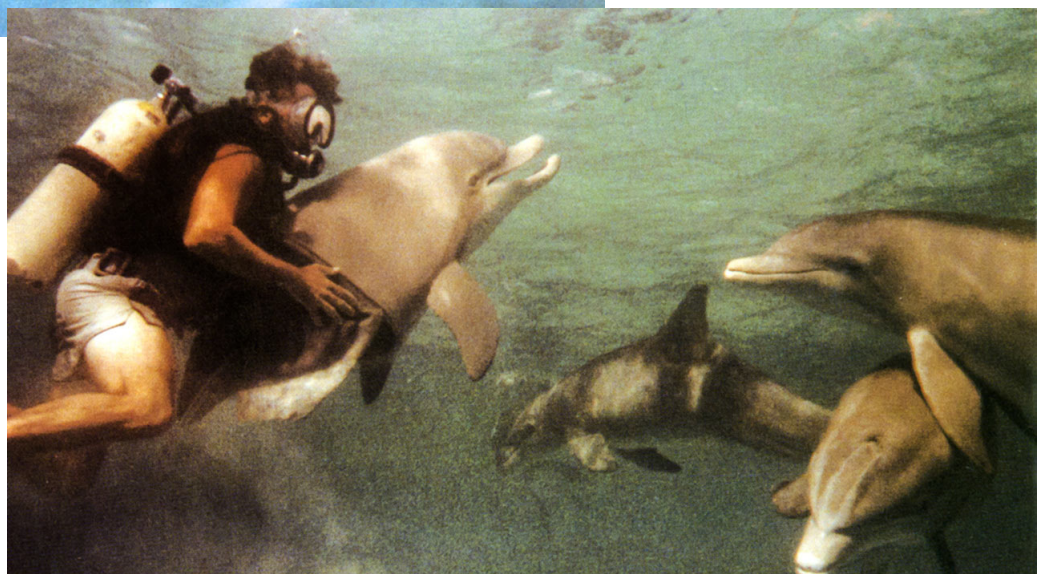
Bob Short prepares a completed dolphin head for underwater testing. Ultimately, three heads of varying mechanical capabilities were constructed, with a fourth extracted from an unneeded full-sized backup model. / Scuba divers prepare their mechanical charges for an early scene in the film in which the dolphins form a circle and bark at a shaft of light emanating from the

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One recurring problem was the dolphin 'eyelids.' Though real







He was very excited about that and wrote in the local newspaper: 'Prop Man Almost Feeding Dolphins.'"

With the testing completed — and serving the function as needed — Short, accompanied by a trainer, took the mechanical dolphins to the United States and the Bahamas where seven wild dolphins from a local show were being held. The training of a simple net that extended from the surface of the water — was approximately 100 feet wide and two hundred feet long. "The dolphins would come over it at any time," Short explained, "but because of much trauma from being caught in a net, they wouldn't go anywhere near it — they stayed three feet away." Although the mechanical dolphins were considerably larger than any of the wild dolphins, somewhat different in coloration, as well as the problems proved virtually nonexistent, the actual shooting.

Trainers had been working with the wild dolphins month by month by the time Short and his unit arrived at the entire training period just to get them to be signaled and take fish from the net. The fact that the dolphins to eat is a major feat because they are wild fish. So by the time Don and I got there, they had been trained to do. Nobody had gotten on a regular basis — they weren't at all like the guy who had caught them — when we went into the water with them he said: 'Hell, no! I was afraid of those things!' So it became clear that we had become the dolphin training crew."

The major purpose in capturing wild dolphins was to get footage of them swimming with the dolphins. The easy friendship that existed between the trainers and the dolphins. If this friendship was to be essential that the dolphins become accustomed to this in mind, Short and his mechanical dolphins had the task of gaining the real dolphins' trust. Short stayed in the water with them for two-and-a-half hours a day. The reasons we'd taken on the Cocoon project with the dolphins — but it had never occurred to us that it was dangerous. Kathy Krieger, one of the trainers, was giving us all these warnings. She warned us about aggressive moves towards them. She said, 'Come over and start snapping their mouths open. Something to make them mad and you'll be back away. Sure enough, our first day it happened. I turned around and there was this huge

Beneath the human husks are the alien forms devised by Greg Cannom — enhanced with radiating glows provided by ILM. / First stage of the dehusking regimen. / To create the effect of Kitty shedding her earthly form. Tahnee Welch's duplicate skin was peeled away by one of Ron Howard's assistants crouched below the frame line in front of dancer Wendy Cooke who played Kitty in her alien form. / Kitty's true self is revealed inside her cabin on board the Manta III.

Although sequences featuring the aliens take place either on the boat or inside the poolhouse, the aliens themselves were shot entirely at ILM against bluescreen. The self-illuminating effect was added later by the optical department, with some additional animated enhancement. / Wendy Cooke, completely dehusked on the bluescreen stage. In addition to prosthetic makeup, the completed alien

that since the aliens were Antareans and had evolved from underwater creatures, they might have some residual webs and things. But the producers seemed to want to go for something more traditional. The one thing they were certain of was that they wanted the alien to be translucent, which interested me very much."

Hester sculpted various alien shapes and, after gaining approval for one of his designs, proceeded to build it full-size. "Obviously, the nightmare alien had to be determined, to some extent, by what Greg Cannom had come up with for the live aliens," Hester noted. "I tried to make it look both scary and pathetic — its eyes were very sad and sunken in, like a corpse. Tim Lawrence experimented with several different materials that would give us the transparency they wanted. Some of them were rigid and some were flexible, but even the most flexible wasn't flexible enough for what this alien had to do — it had to start completely curled up and end up straight, with its back arched and everything. There is no translucent material that will do that and not rip. I decided that a semi-rigid, clear urethane would be the most durable and I began sculpting the alien in sections. Basically, I made it like a GI Joe doll, with solid parts and hinges and joints so that it could unfold. There was a pelvis section, torso, upper and lower arm and leg parts, a neck section and the head — so, right there, it required at least twelve molds. After the molds were made by Earl Ellis and Brian Penikas, I constructed a vascular system for each piece which was cast right inside the clear material to give it the appearance of something organic. Then I disguised the joints with a nylon fabric. The first body made from the nightmare molds was to be used as a dead alien in a different scene and, from what I understood at the time, would not be seen very clearly. As a result, I regarded the first dead alien as a prototype for the later nightmare alien."

While Hester worked on the detailing of his dead alien, associate Shawn McEnroe was constructing another important element of the nightmare sequence — the embryonic sac from which the creature would emerge. "The sac had to look as if it was giving life to the alien inside," explained McEnroe, "like a chicken placenta. But over the thousands of years, something had gone wrong with its life-giving force. They wanted a very web-like mass with an umbilical cord coming out of it that attached to the shell of the cocoon. The sac itself was made from a very expensive, translucent silk that cost about \$70 a yard. There was also an inner sac made out of a semi-opaque rayon. So it was a double sac effect — you'd see ripples on the surface and then ripples inside. Over the sac, I sculpted a sort of vein network system that flared out on both sides — it was like a spinal cord and it had to conform to the shape of the alien in the fetal position. I made a mockup of Tom's alien out of plaster of











process, it can get very grainy and dirty and scratched. Since this shot also needed to have the main title inserted, we ended up putting the title in ourselves. Otherwise the shot would have been triple-duped, which really would have magnified the problem. We were all very worried about that shot — but, surprisingly, it looks pretty good in the film.” While the boy, the telescope and the window frame were photographed against a blue screen, the moon and the moving clouds were created by the matte department. Working under supervisor Chris Evans, matte artist Caroleen Green painted the clouds on a piece of glass and Paul Huston, the matte camera operator, programmed it on the motion control camera.

The opening then dissolves to a sort of spaceflight without a vehicle — a point-of-view shot of earth, also a painting by Green, approaching nearer and nearer, penetrating a thick layer of clouds, entering the ocean and finally ending at the bottom of the sea. Ralston was particularly concerned with generating realistic clouds for the sequence — a recurring problem in effects work. “Clouds are always difficult, because there really isn’t any *one* thing that accomplishes it ideally. In the past, we’ve tried different things to get them — like sculpting them out of fiberfill. But we have found that you can get away with that only if you have something to cover it — like a quick lightning flash or something. Though it’s not perfect, the cloud tank still comes the closest to generating organic-looking clouds, and we went back to using it for *Cocoon*.”

The undersea shots — requiring a miniature sunken city, animated dolphins and a powerful light beam that cuts through the water — proved to be the most difficult of the sequence and involved virtually every department at ILM. “We couldn’t actually shoot it underwater,” Ralston continued, “because water just destroys the scale on everything — it wouldn’t have been believable. We spent a long time testing the shot and we shot a lot of elements for it which were later dropped. We had seaweed flowing around and fish swimming through the pillars of Atlantis, but we realized it was just too distracting — people were watching the fish instead of paying attention to the temple in the background. We used a rippled glass effect for the very beginning, looking up at the underside of the water with the light beam coming through. That was all done motion control. We shot it tilting down, off of the glass, with two or three different exposures to break up the pattern.”

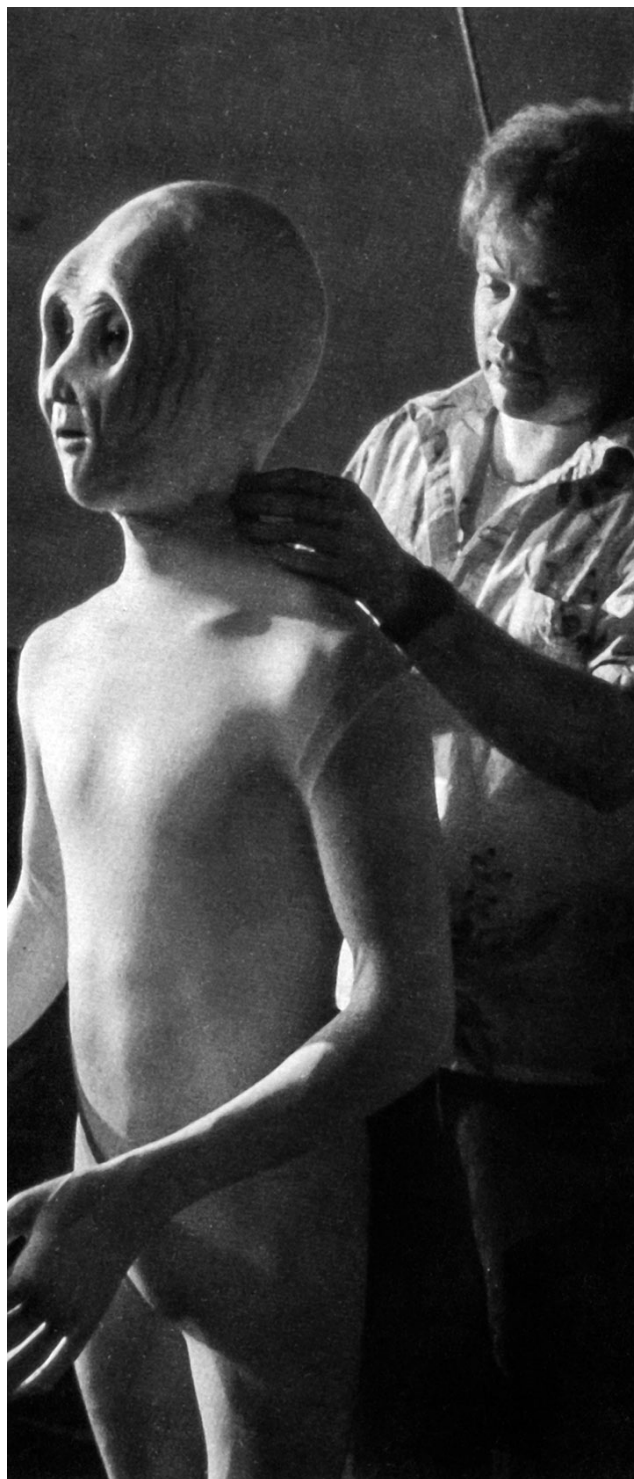
The numerous dolphins in the shot were provided courtesy of the animation department, under the supervision of Charles Mullen. The most prominent, in fact, were roto-scoped from real



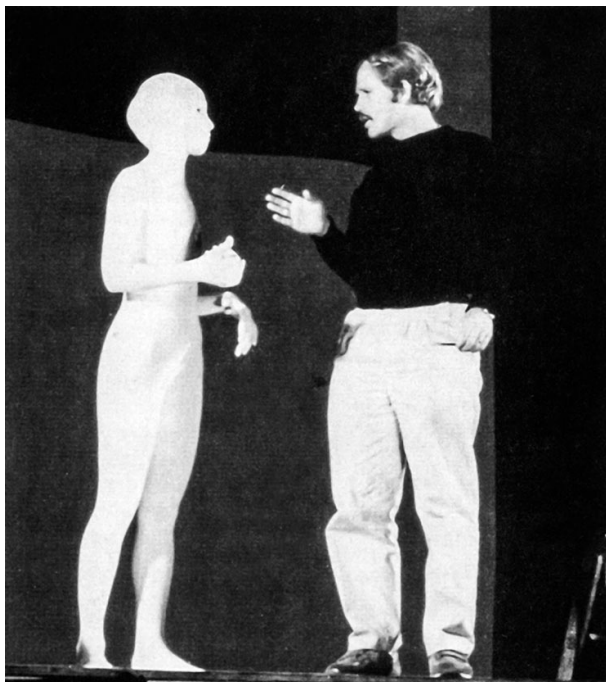
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Also featured in the opening sequence is a glimpse of the mysterious ruins later revealed to be the lost city of Atlantis. Built by the ILM model shop — from a concept provided by Ralph McQuarrie — this small-scale Atlantis was a miniature representation of the underwater set which was used on location in the Bahamas. "The Atlantis miniature was very simple," said supervising modelmaker Steve Gawley. "The entire set was about eight-by-sixteen feet. The columns were plaster and then built up to look like stone. The temple was made of balsa wood and the stairs leading up to it were made of pine, cut many times on a table saw. An eighth-inch saw curve makes a great scale step. The whole thing was covered with gray Tempera paint. Then we put foam rocks in the foreground and Ken Ralston broke up some coral pieces to give it texture."

To simulate an undersea environment, the miniature set was filmed on a smoke-filled stage. Textured plexiglass, commonly used for shower doors, was suspended between the stage lights and the completed miniature. When the plexiglass was moved, it created a traveling light on the set, enhancing the impression that it was under water. "The heavy smoke environment gave it a great sense of depth," said Ralston, "and the whole shot was kept murky and dark. It had a lot of different passes, too. We had ripple effects on the foreground and light effects on the temple. Also, we lit the background differently than the foreground to break up the planes of the miniature and give it more depth. So the whole opening underwater sequence was shot dry, with the exception of some passes of silk blowing around which we did in the cloud tank. All together, there were about thirty or forty different elements in the shot."

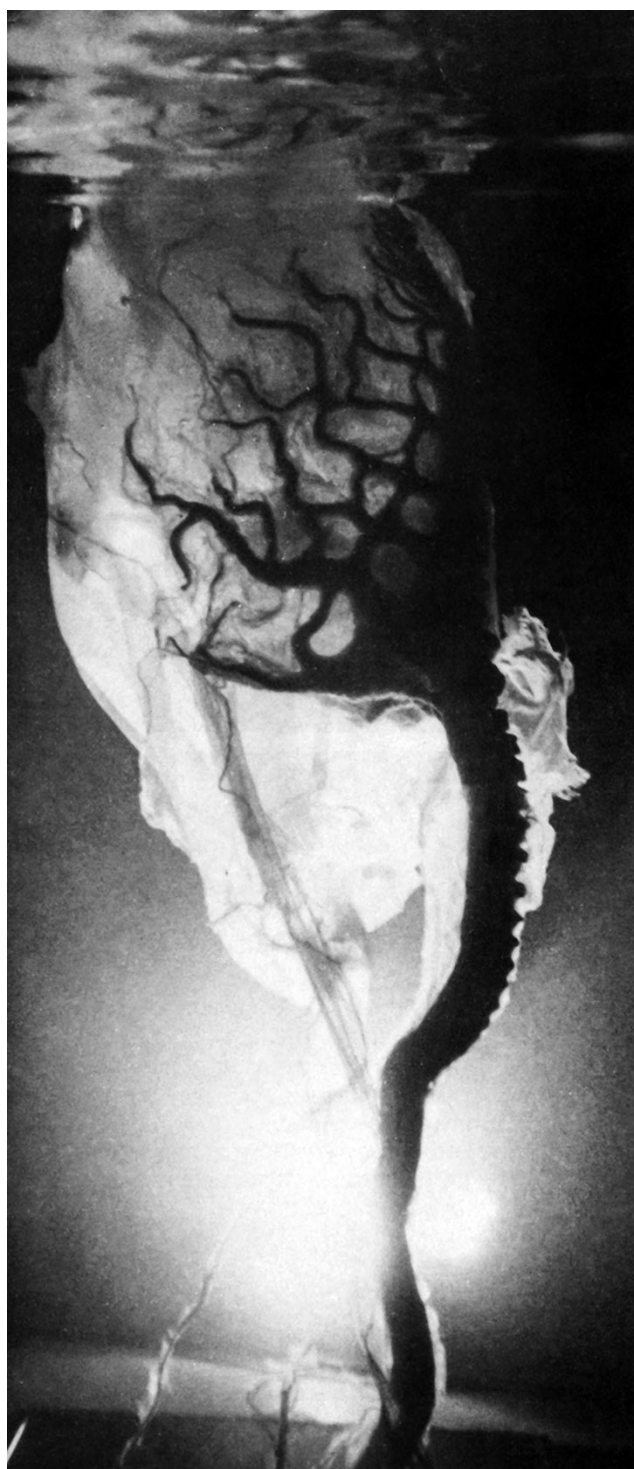
From the standpoint of the optical department, the eventual streamlining of the opening sequence was a great relief. "Ken had been shooting elements on it for about three months," Berry recalled. "I thought there were going to be about six hundred elements for that shot; and I was already so busy at the time, I didn't even want to think about it. He shot all these different kinds of fish in a four-inch-wide fish tank on the stage — the tank was that narrow so the focus wouldn't change. So we started off with all of these fish elements and, one by one, they were dropped out. All that was left then were the miniatures, the animated dolphins and various light effects. The color we filtered in. Everything had been shot neutral gray, so we flashed it a blue in the beginning and green at the end. In terms of optical work, I think the opening sequence is the most effective in the film."

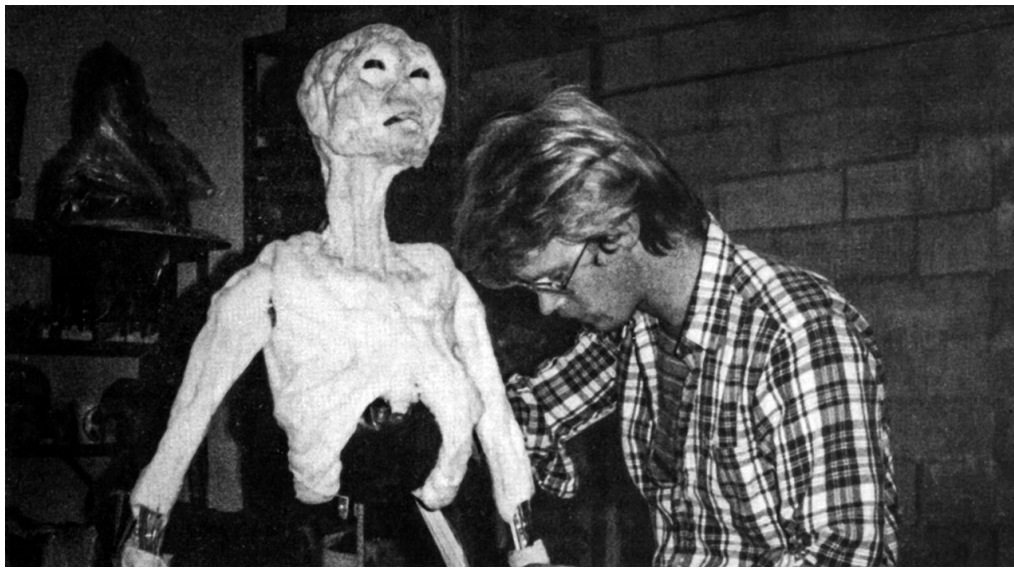
The last shot of the sequence has four dolphins in an uncharacteristic circular formation, barking up at a beam of light. Featuring the mechanical dolphin heads built by Robert Short Productions, the shot required some enhancement by the ILM optical department, which provided an overall flash element as

Surprised during a j retirees d neighbor: Several sl sequence the earthl hasty reti extensive rotoscopi action ch. friends ar soon esta with the by a frien Featured sequence called for seated in proved ea amusing bluescree sitting on test with Greg Can join betw suit prior photograj Director I discusses motivatio Prescott. alien mak into the p scenes w and full-fi









Because one of the first precepts in developing the aliens' appearance was that they be translucent, Hester fashioned the nightmare aliens out of semi-rigid clear urethane. This curled-up version was to have been contained within the embryonic sac, while a second was capable of unfolding into an arched-back position. Ultimately, the dying aliens were painted when it became apparent that an opaque construct was more in keeping with the look of the live aliens. / The screaming head was a combination hand- and cable-actuated puppet shot at ILM — the only part of the nightmare sequence to actually go before the cameras. / Ron Howard instructs Hester and Antarean-costumed Wendy Cooke and Gabriella Sinclair during one of the dying alien scenes. Cable operators stand ready poolside to activate the creature. / In a scene deleted from the film, the two aliens gently return their dying compatriot to his cocoon. / Although the producers eventually opted

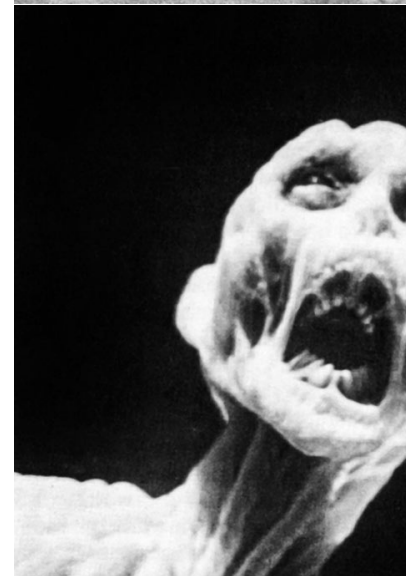
with the idea. It's such a quick cut in the film, I'm not sure it's even noticeable."

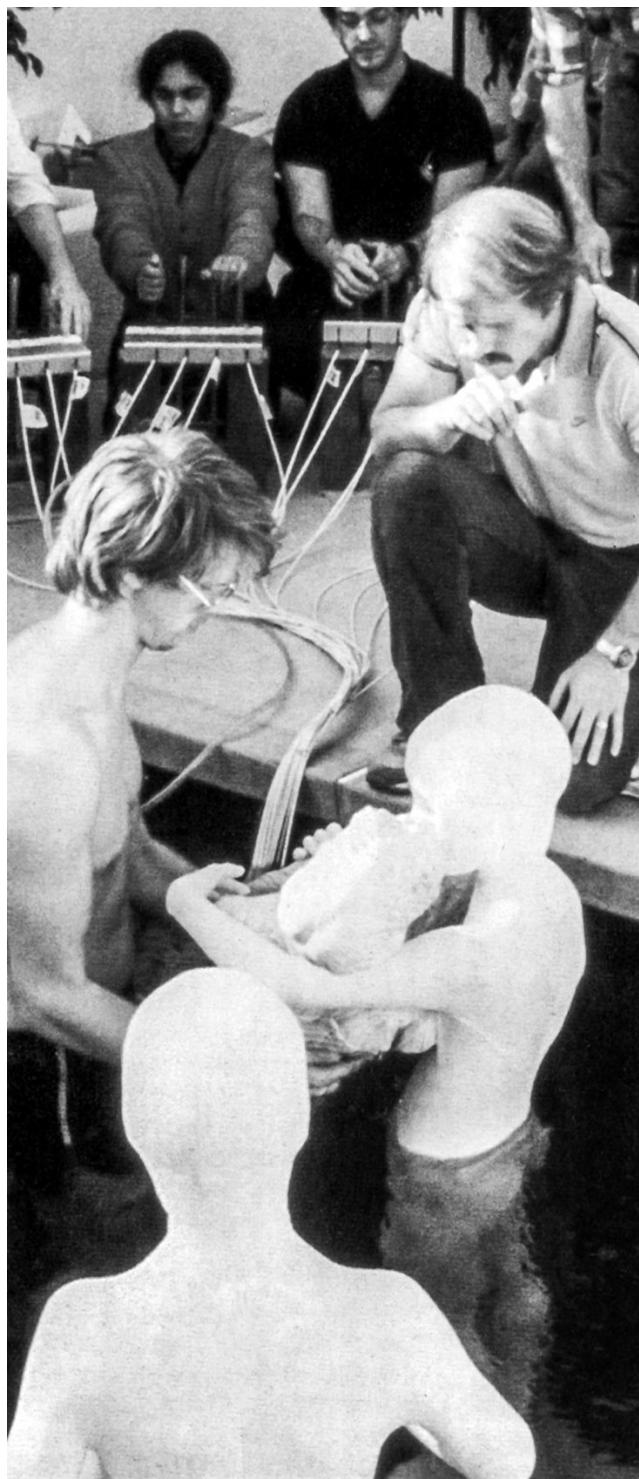
While the aliens and the rest home residents become friends, Jack and Kitty engage in their own kind of interaction, culminating with the 'sharing' sequence in the pool. The Antareans' version of making love, the sharing experience involved the 'essence' of Kitty rising up out of her body, spinning around the room, and — at the climactic moment — entering Jack's body. "In the beginning," Lichtwardt recounted, "we weren't sure if we wanted it to have a real human form or if we wanted it to be an indeterminate shape that grew up out of her. We tried a lot of different techniques and decided we liked the look of the human form best. Using some reference footage of a girl swimming underwater, I hand-animated the form and then David Berry softened down the hard edges a bit. In the film, it's very hard to tell that the shape is human. It just looks like a ball."

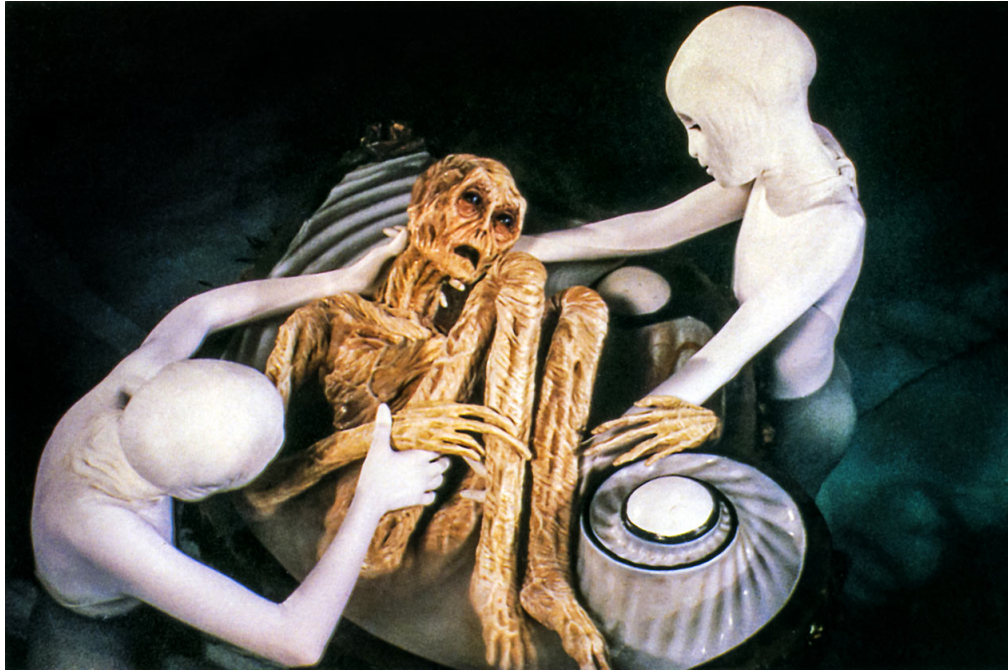
"We used basically the same technique we had used to get the vaporous glow on the aliens," Berry explained, "except, in this case, we printed only the vapor into the shot — we didn't print the animated shape. By dropping out the actual form and just leaving the vapor, it gave it a more mysterious look. We also had vapor coming off of the actors in the reaction shots of the two of them in the water. We used pretty much the same technique here, too, except the actors weren't bluescreened so the mattes had to be rotoscoped."

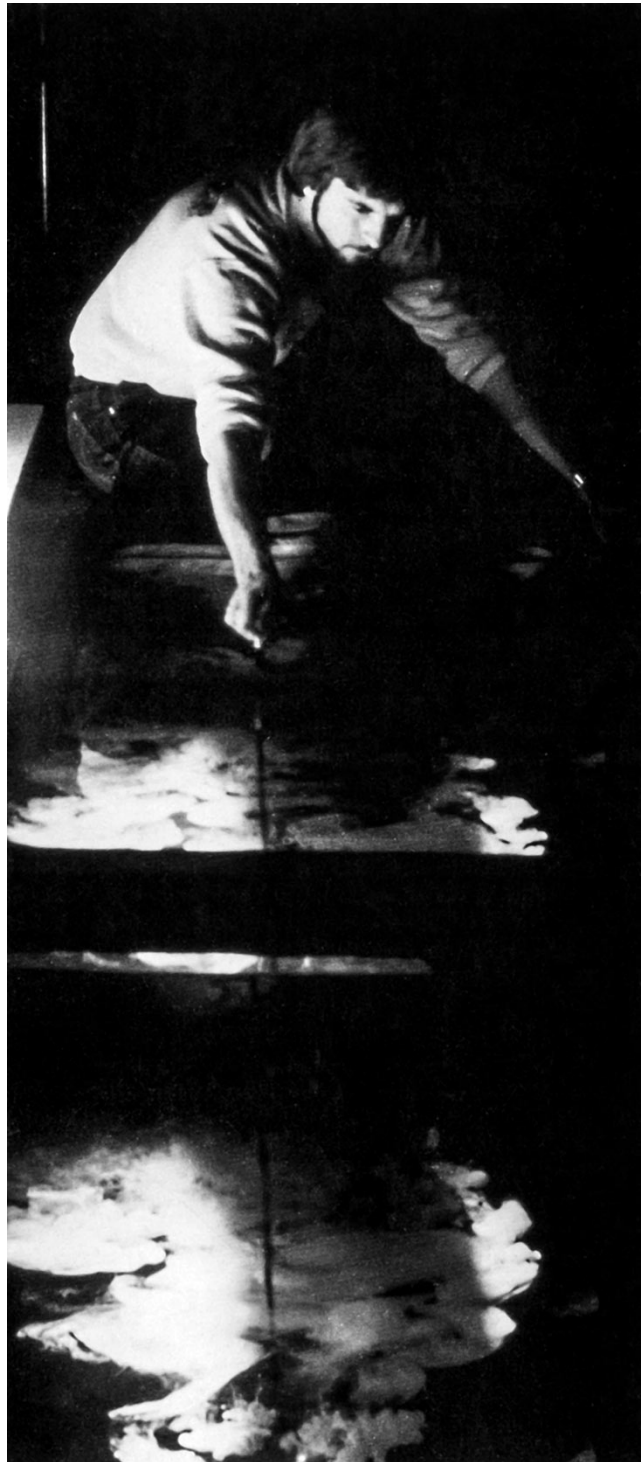
In the next phase of the sharing sequence, the form curls up into a ball and begins to spin around the room. Several four-inch plastic models of an alien in a fetal position were sculpted by Tony Laudati, and then photographed by Charlie Mullen on the facility's motion control animation stand. "The sculpture was mounted on a rod and was spun around during the exposure, creating a convoluted trail that could be repeated. The animation table itself didn't move since it was rigged on a gimbal mount that could be spun around, and the computer lens board could do all of the moves except for the zoom." During photography, the miniature alien was top-lit and shot against black — with various hues imparted via different-colored gels. "We had done a test on a plain, white sculpture, but the resulting trail was too smooth, so we applied glitter to it to give it some texture. Some of the glitter would reflect the light, rather than just light up the surface of the model, so certain spots would get very hot and the colors would change from an orangish-red to a yellow. It just made it look much more interesting."

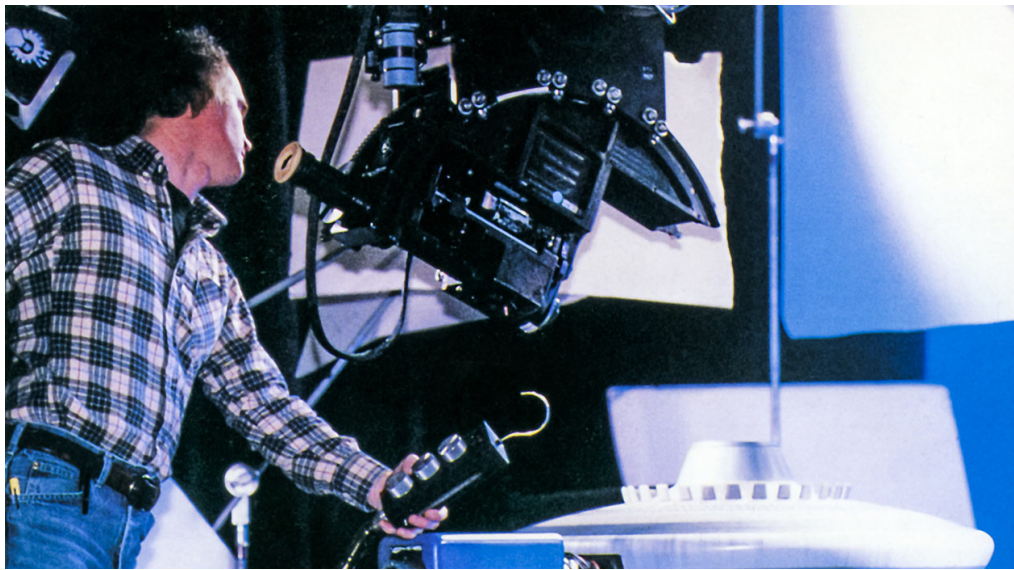
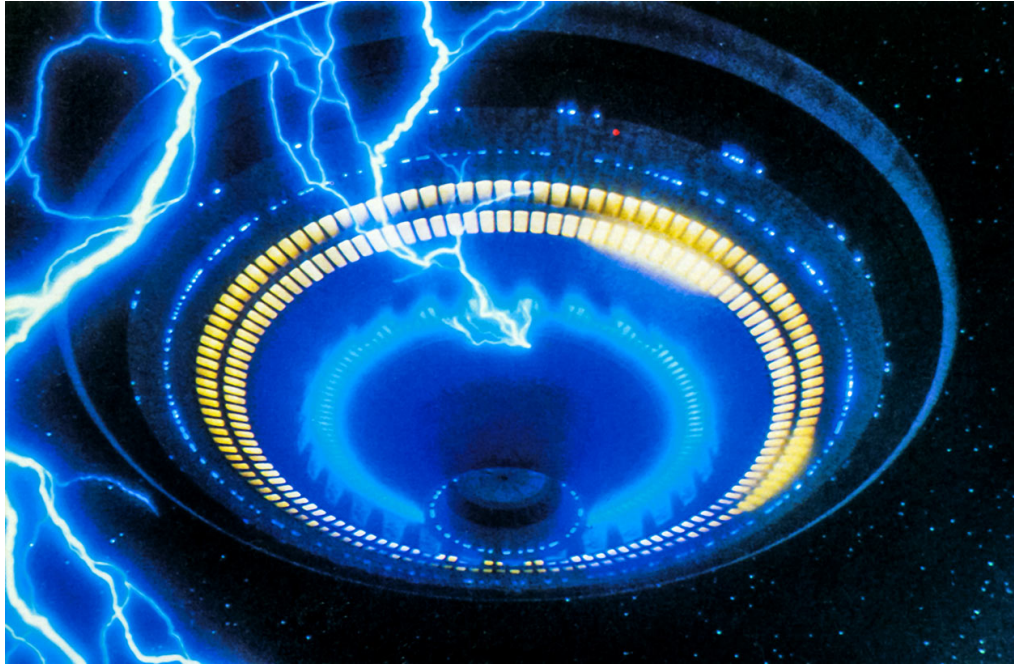
"One of the most difficult things about the sequence was linking up the hand animation of the form to the actual model," noted Lichtwardt. "The form comes up slowly, hooks up with the model and then starts spinning around really fast. That transition from hand animation to the model was eased somewhat when optical put the glow in later." One of optical's primary











The Manta III begins its heavenward ascent. The six-foot model — built primarily by Ira Keeler — was shot against bluescreen and matted into a water plate. / For identifiably close shots, live actors were positioned in front of ILM's blue screen, then composited with footage of the mothership descending through cloud tank turbulence. / For longer shots of the Manta III rising from the water, stop-motion puppets — some fully articulated, others only wire-armatured — were animated by Ken Ralston. / Steve Gawley at work on the mothership's portal — an oversized section deemed necessary when the basic three-foot saucer model proved too small to house the mechanics needed to open its doors. Cable-actuated via motion control, the enlarged maw section was optically reduced and then matted into the

Though originally conceived as a stationary model, a slow rotational movement was incorporated after the saucer was completed to help bring it alive. "We had to add a top mount so that it could rotate around the center line, which took about a week. We put a small light in the top mount to create the interior lights of the ship. Usually, modelmakers cringe at the idea of adding something to a completed model, but I had left plenty of space in this one to work with."

The model also needed functional doors that could open. After several attempts to mechanize the tiny doors on the three-foot model, Gawley decided that they were too small to work with and proceeded to build a separate, larger door section that would be matted into position over the smaller spaceship. "The door section was also vacuformed — two cones inverted into each other. We had some difficulty with the cones because they were so high. The physical properties of the plastic only allowed it to stretch so far. The doors themselves were actuated by twelve cables that were hooked up to a stepper motor. The cables had a series of springs on them that worked against the cable to eliminate the little bit of flutter that it had. When it was shot, the motion control element eliminated the flutter completely. We wound up using the doors in about four or five shots."

As it appears in the film, the saucer is a magnificent object surrounded by tumultuous clouds and flashes of lightning. Finally coming to rest in the sky, the mothership throws a blinding beam of light down on the boatload of people eagerly awaiting it. The dark, swirling clouds, like the ones in the opening of the film, were generated in the cloud tank — this time with more successful results. "I was happier with the cloud footage in the end sequence than I was with the opening sequence clouds," Ralston confessed. "They are more realistic. We went through an amazing amount of footage trying to get a look I was happy with. We experimented with different salt solutions and things, trying to find what would work best. We also did a lot of lighting changes. We shot them much hotter than they appear in the film so we could pull mattes off of them. Getting the clouds right was tricky — even the temperature of the day would change the way they looked."

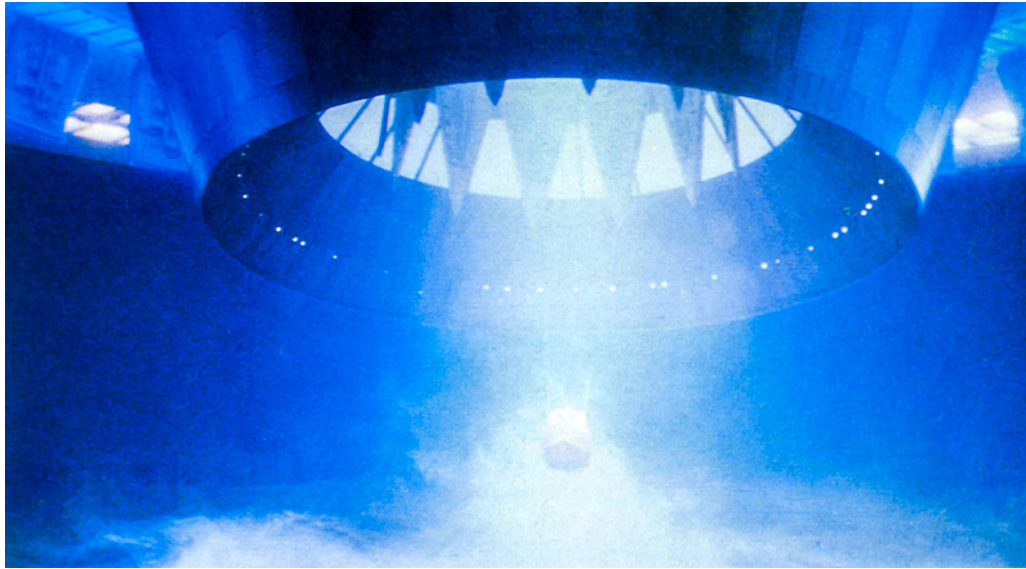
In addition to using the cloud tank, Ralston generated cloud footage by shooting sculpted fiberfill in a giant cylinder with the camera turning on it. "We shot four or five passes, double-exposed over each other to break up the hard edge. It gave us a weird cylinder of clouds that was moving around — unlike anything we could get in a cloud tank. This method gave us a lot more control over the whole process."

The animation department provided both the hand-drawn lightning effects and the powerful beam of light that cuts through the sky. "The beams were just trapezoids lit from





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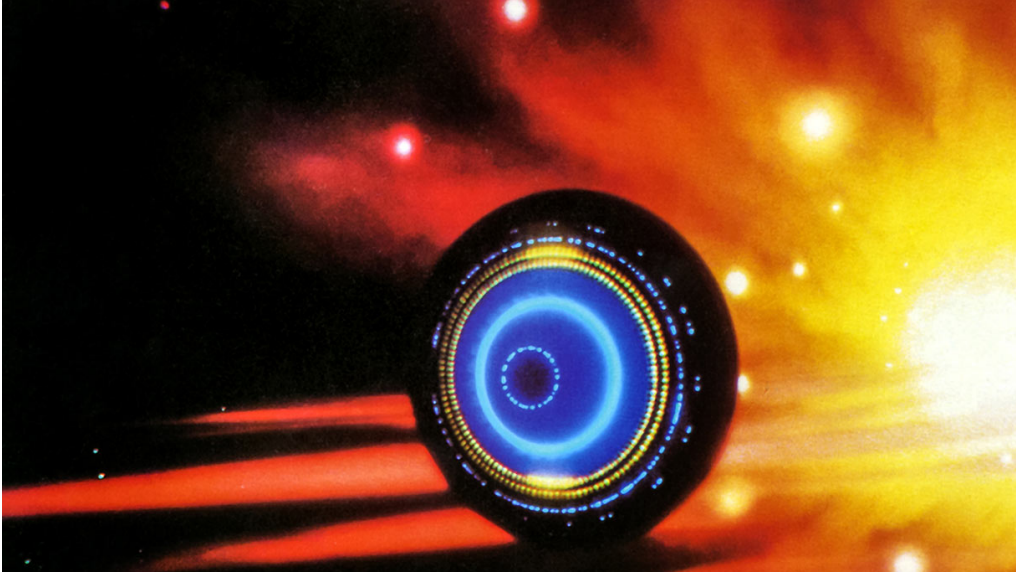


covered with little pieces of cotton. He animation camera so the spring ran from of the frame. Then he sprung the spring a program and moved it around a little bit of upward-rising spiral cloud effect that ship. Unfortunately, a lot of it got lost.'

One shot from the same sequence — a spaceship looking down at the boat clouds — was a particularly difficult one that would never come together. "I was sure it was the worst shot in the show. There were just no good work out. First of all, the water had to be plexiglass moving side to side and up and down in different double-exposed passes. The sky was very flat. You are looking at a flat-top of water up in the middle and is very soft and wide. I was forever just to give it some form. Then the camera came down, and it doesn't have much shape. The light beam is moving away from you, so it doesn't look like that. That was one of the shots where I used film. It was a last-ditch effort to make the shot work. I put a lot of fiberfill on a rotator and put a large screen in front of it and shot it while we moved around. It matched what the cylinder was doing. I got a broken-up look. We also shot the light beam itself, which helped it a lot."

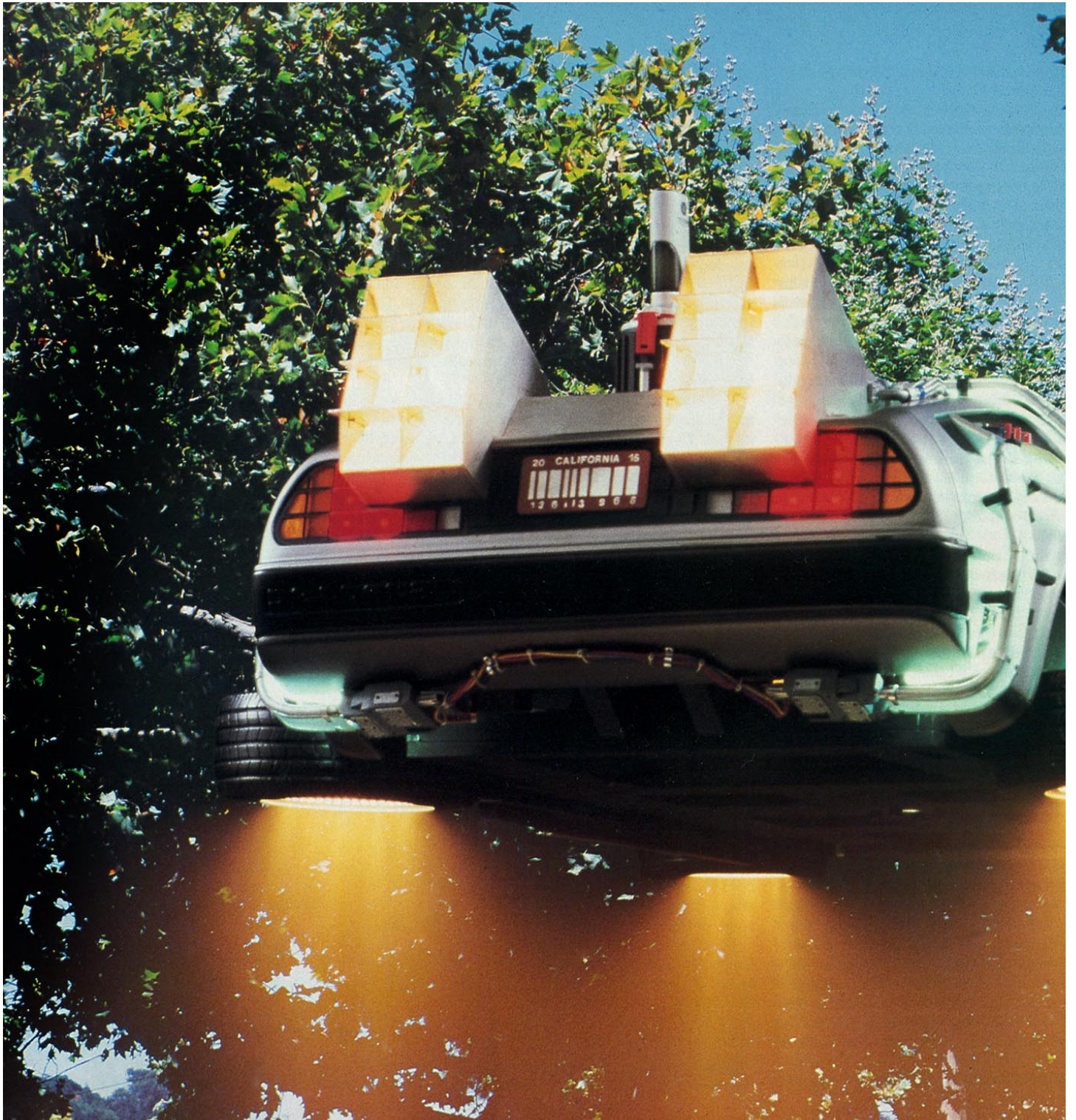
Requiring three models, stop-motion elements and a difficult optical technique, the shot of the *Manta III* being lifted up into the belly of the whale was perhaps the most ambitious in the film. "We had a complete six-foot one that we used for filming the sequence. It was an actual *Manta III*. It had a lot of six- to eight-inch puppets on it to represent all the old-timey boats, like the Walter character. We had an actual model of the hull of the boat which we used for the underwater shots as it is being pulled up. We had a model of the *Manta III* that was about a foot long for the shots of the boat being lifted into the whale. The figures on it also, but they didn't move — too small to bother with."

Steve Gawley, who supervised construction of the models, started with drawings of the boats that the makers were going to be using in Florida



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BACKYARD ADVENTURES SPIELBERG STYLE

*article by
Janine*

on *Goonies*, the movie had been cut down to only about eighteen effects shots."

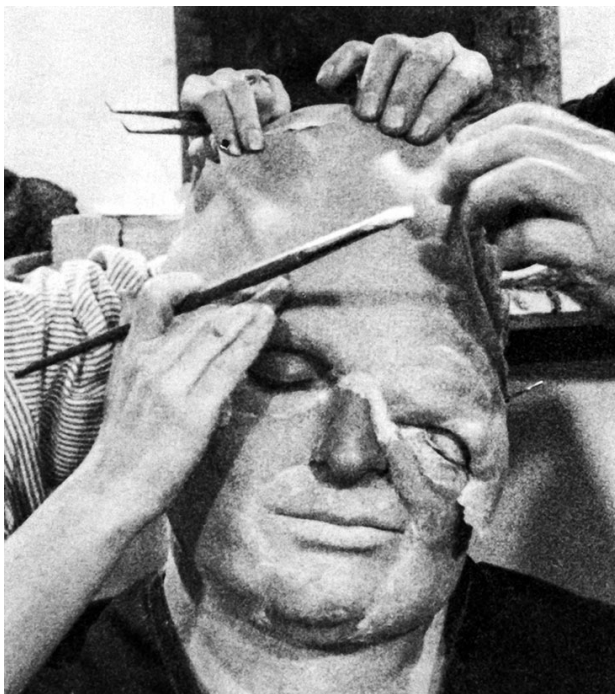
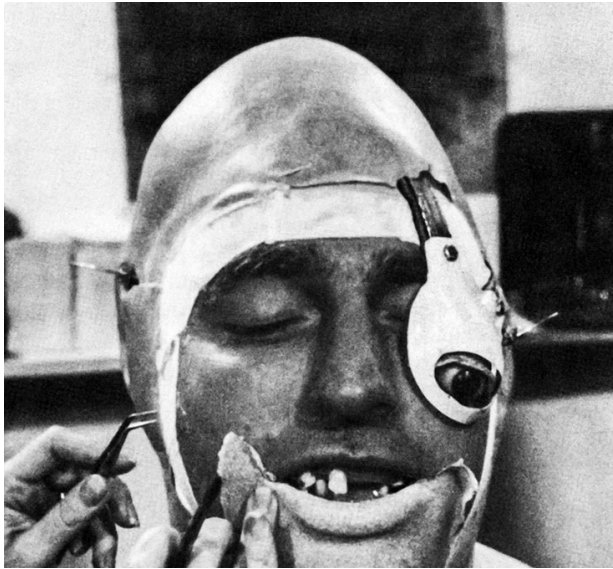
"There was also a real push throughout to try and transfer work from ILM to the production itself," said effects art director David Carson. "And because they were always involved in doing at least some practical work for each sequence anyway, it became very cost-effective for them to say, 'Well, how much of this can we do ourselves?' In addition to the financial aspect, there came a point when the story crossed over the line of reality into fantasy. For example, a lot of the initial effects had to do with things like sword-fighting skeletons that come to life in the treasure room. Ultimately, though, Steven Spielberg felt that the film should not be a fantasy. He also felt it should come down in scale — not for cost reasons but because he wanted the film to be something that kids seeing it would think: 'That could happen to me. If I were to find an underground cavern in my town, this could happen.' So the multimillion dollar effects film [screenwriter] Chris Columbus had conceived became a much smaller adventure film in the end. And although it was somewhat frustrating to see a lot of interesting work get scaled down and even slip away, the work we did was good." With the storyline more clearly established, *The Goonies* was transformed from a fantasy-adventure to a fantastic adventure, and although ILM's contributions were greatly reduced in quantity, the effects were nonetheless vital.

With doubloon and treasure map in hand, the youthful adventurers begin their hunt. And when they line the cutout doubloon up with an abandoned lighthouse and a rocky outcropping on the horizon, the exact locale of the legendary treasure is affirmed with X-marks-the-spot certainty. The shots featuring the boys' sighting through the doubloon were among the effects rendered by ILM. "There were two cuts in that little scene," explained McAlister, "where we put the doubloon and the kids into the shot using bluescreen. While we were on location in Astoria, Oregon, we had shot a background plate with a little bit of landscape in the foreground and the ocean in the background. Since the existing rocks out in the ocean weren't quite what we wanted, we painted in a couple of rocks and then did a bluescreen shot of the kids and a separate bluescreen shot of the doubloon. The end result encompassed the ocean with the two rocks in the background, the kids in the middleground and the doubloon Mikey is holding in the extreme foreground. As he's looking past the kids, he's lining up the holes in the doubloon with the two rocks that we painted in as well as with the lighthouse."

"In addition to matting in the rocks," elaborated optical supervisor John Ellis, "we used a matte painting of the island and the lighthouse on the horizon because they weren't there in the real scene, either. So along with the background plate of







held up, it would look like an actual focus change."

Because infinite depth of field over such a wide range would have been a clue that an 'effect' was in progress, the subtle touch of rack focusing made the shot appear as it would had it been done live-action. "The way we did the rack focus," explained McAlister, "was by doing a precomp with the background and the middleground kids and then another composite with the kids in the background and the doubloon in the foreground. That way we could throw the kids and the background slightly out of focus and keep the doubloon element sharp when we wanted people to look at the doubloon. When we wanted people to look past the doubloon and see the rock, then we'd shift the focus to the background."

With the doubloon pointing the way, the boys find themselves at the ramshackle Lighthouse Lounge — actually an authentic-looking set created by production designer J. Michael Riva and crew — in which the dastardly Mama Fratelli and her fugitive sons have taken refuge. When the Fratellis drive away, the gang decides to explore the forbidding structure. Winding their way down into the basement, they discover — to their horror — a counterfeiting machine, a dead body hanging in the meat locker and some mysteriously terrifying noises coming from an adjacent room. The Fratellis' unexpected return forces our heroes to hide in a grate-covered passageway in the floor — which, coincidentally, is the opening of their tunnel to adventure. Only Chunk (Jeff Cohen) is separated from the group and captured by the Fratellis, who lock him up with the originator of the scary noise. As Mama, Jake and Francis follow in hot pursuit of the others, Chunk finds himself face-to-face with the third Fratelli brother, Sloth. The unfortunate sibling — an enormous, deformed, growling monster — has been chained to a wall in the basement and left to watch television all day. His menacing countenance only adds to Chunk's alarm. But after the initial panic subsides, Chunk finds in Sloth a kindred spirit, and the newfound friends set out on their own quest to rescue the Goonies.

Defining and developing the Sloth character proved to be a challenging group effort. Rendering the paradoxical qualities of the monster with a heart of gold called for an intricate combination of traditional makeup techniques, unusual appliances and mechanized facial movement — with the process going through a labor-intensive evolution before it was ultimately realized on film. To transform the concept of Sloth into a viable entity, Amblin first called on effects makeup artist Craig Reardon, who had previously created some of the bizarre manifestations

The Goonies on pirate treasure adventure escape by Fratelli, the Goo growling in the basement (John M. Fratellis misund was initially engaging to young concept makeup was ultimately executed by Studios — a monster which i



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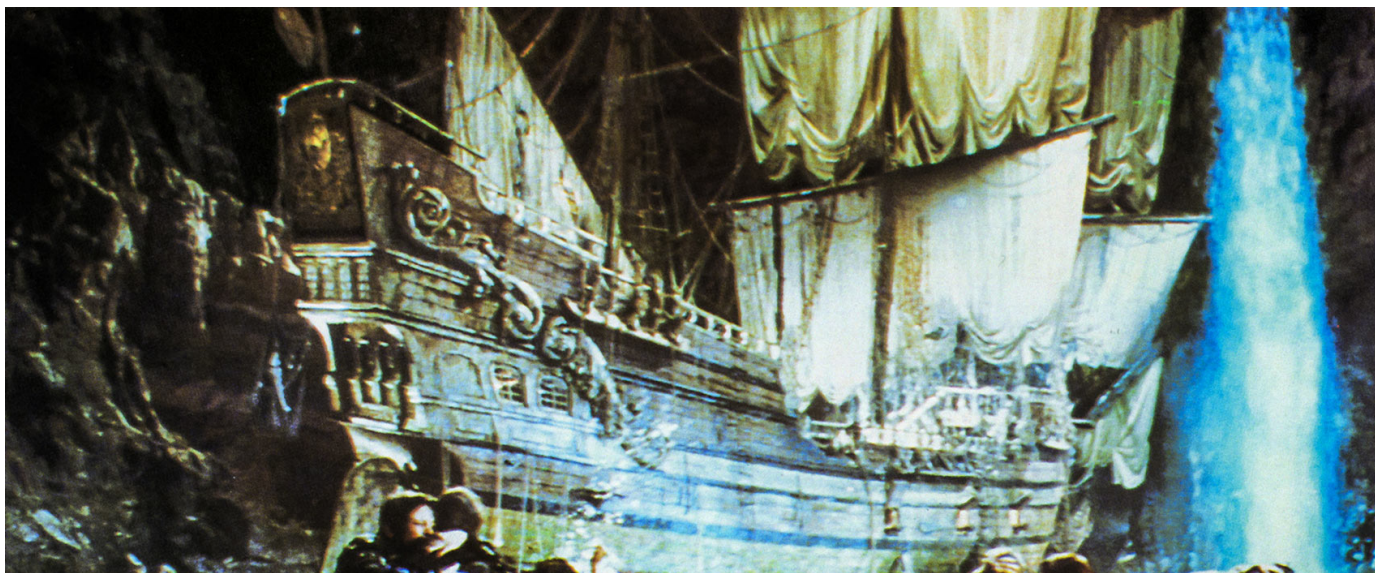
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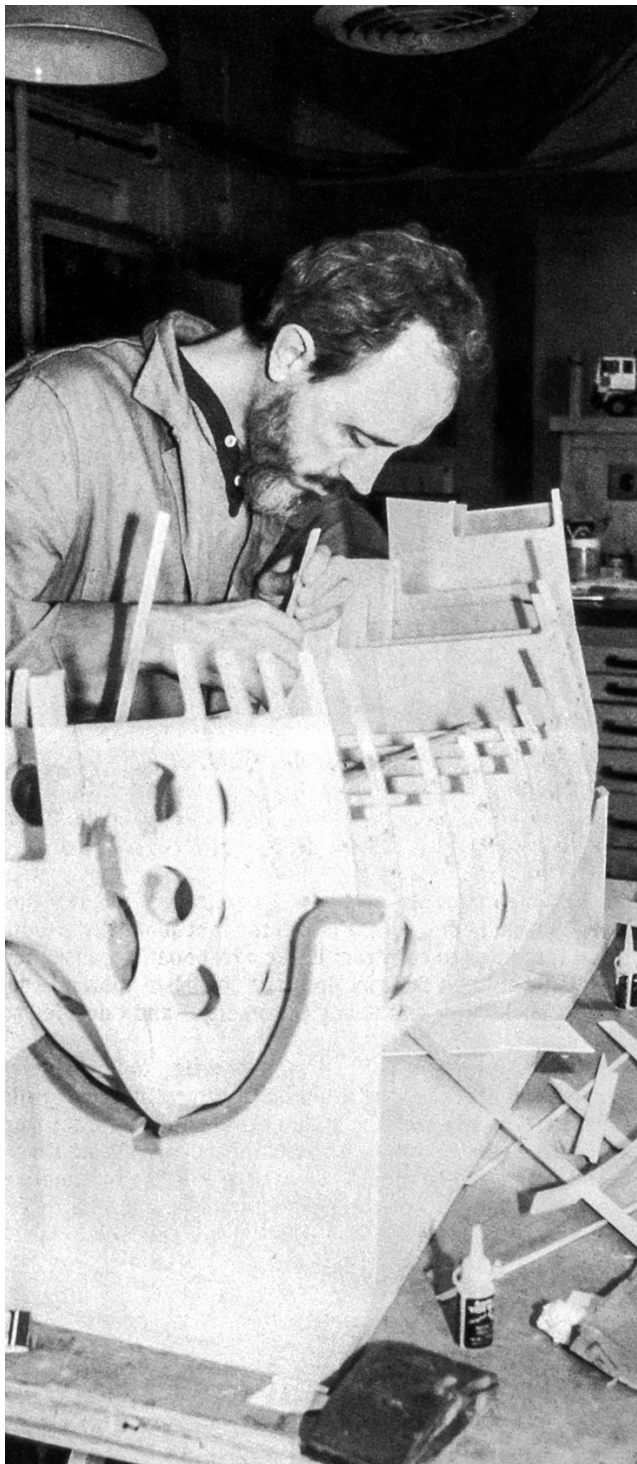
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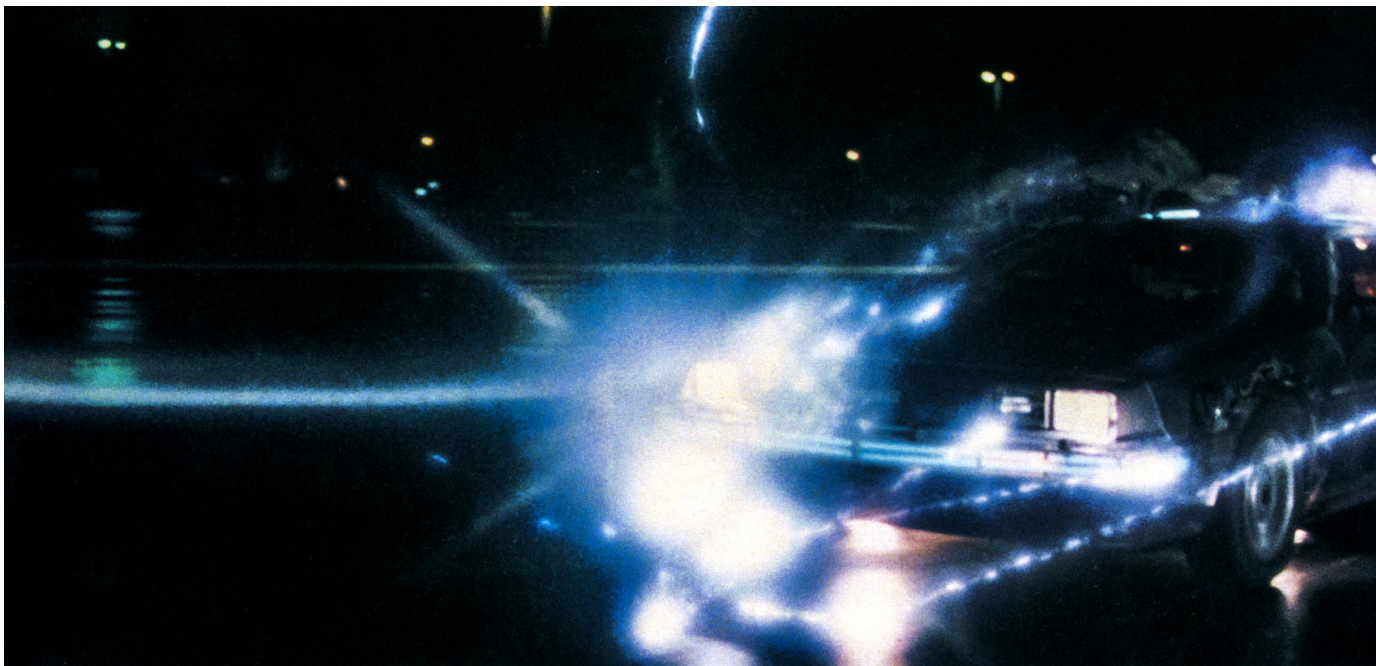


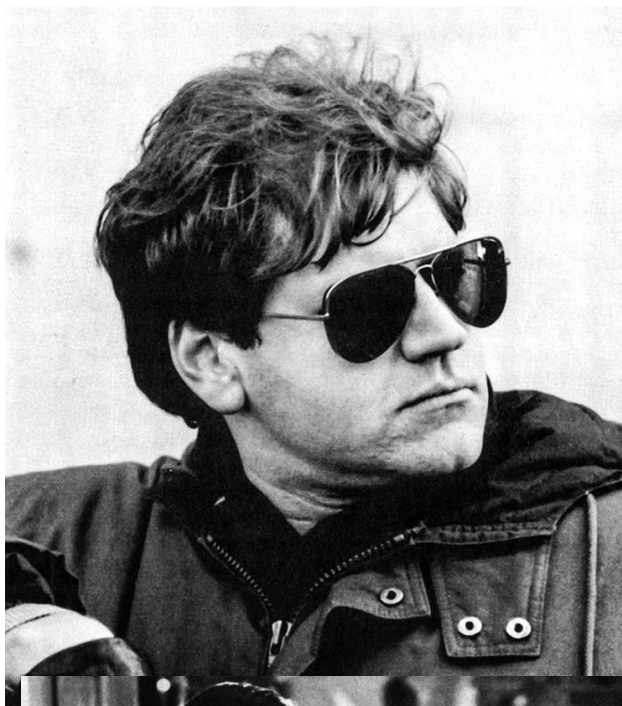


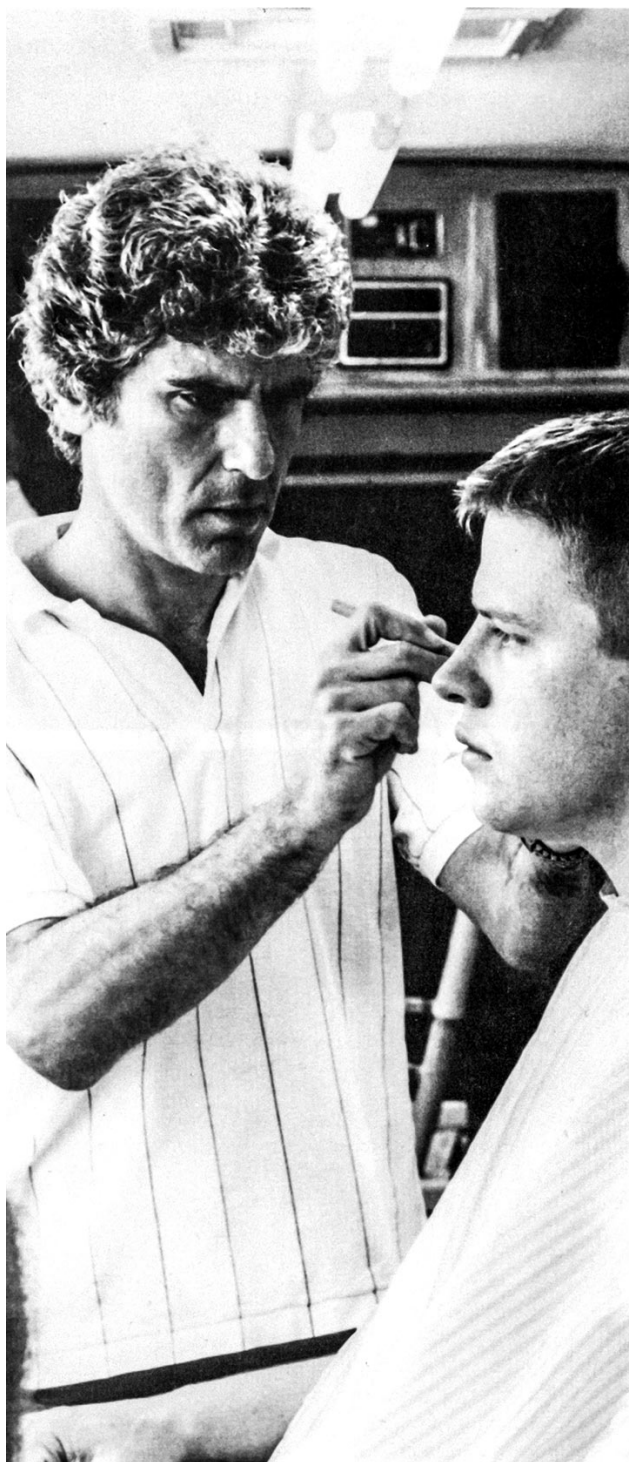
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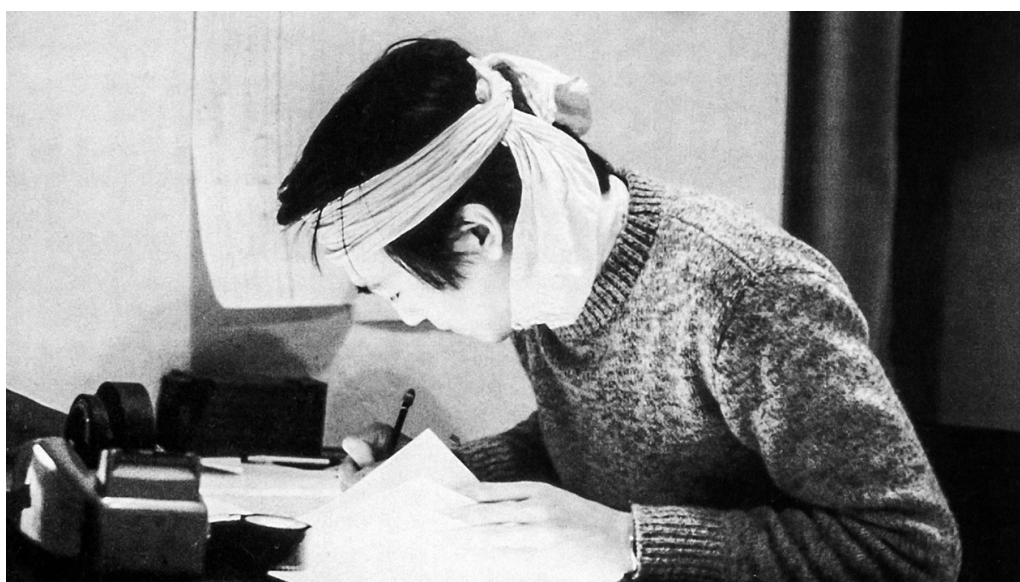












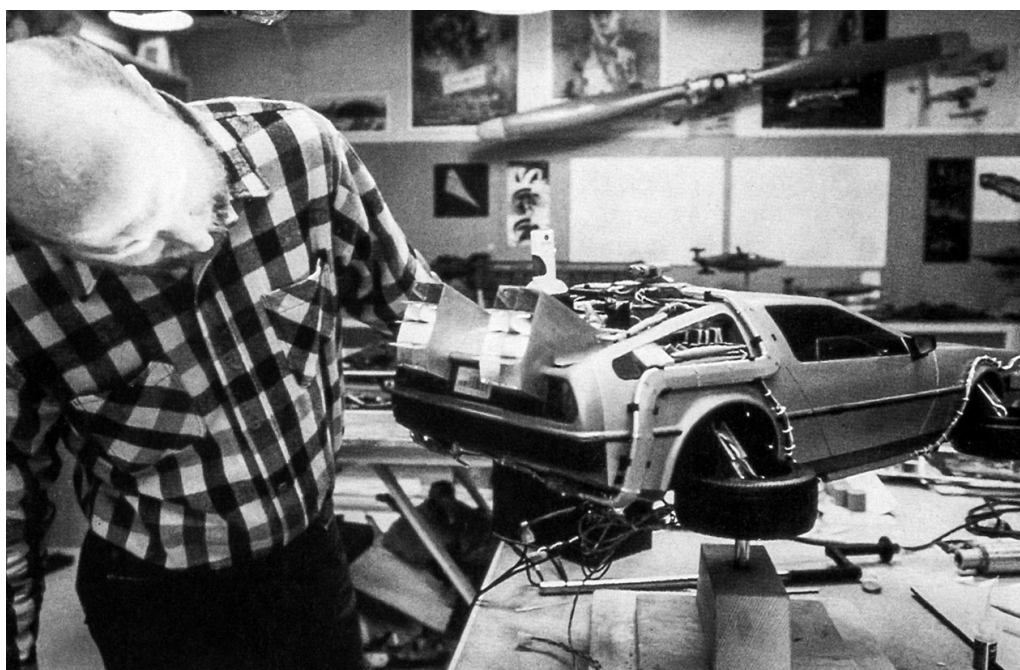
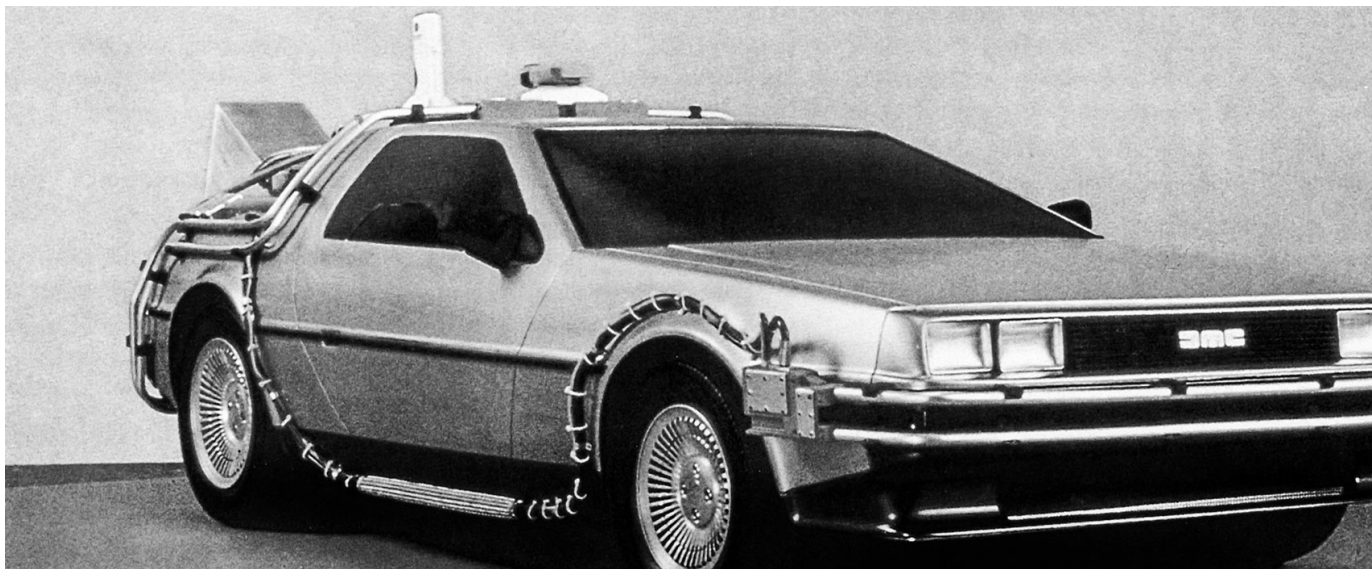
wheel wells of the car. They ignited just on. So to match the consistency from Regan animated fire and its reflections on the road. She did a great job in using the as well as animating some more flames that needed them."

Once the time slice effect had been DeLorean successfully routed through pearance to a more earthly plane was "Somebody had the great idea that the back in sections," recalled Takahashi, "v ing in a blinding flash, and the next second moving the whole section of the car third section would appear, and so c Charlie Mullen came up with the design: coming back together, and it was all d only problem was that the live-action p in from the east, skidding around and l right. We were supposed to take the car the middle of the frame — *and* have it s ing with the live-action as it skids toward and Phill took a transparency of the (tioned off that piece, and were able to sh stand to make it appear in various sec manner of hand-pulled frames. It was the the rest of the scene — and after the la into the first frame of the live-action car. a glow to the car as it came out from the blue glow that was added when the c together. Once together, that glow diss

"There were lots of little tiny details Ralston commented. "The time slice she makes them work nicely, too. They don't just kind of like *wham* and suddenly never wanted the audience to get ahead. He never wanted you to be able to happening, he wanted the car *gone* by the it all out."

After going through the time slice, l home town — created on the Universal designer Lawrence G. Paull and crew - playing none of the urban decay seen ear runs into his father — now a shy and b the local soda fountain, the chance forever. Crossing a street a short wh George out of the path of an oncom hit — right in front of the house of h awakens in the bedroom of the beautifu Baines, who — much to his consternati





and happily-married couple. When the t
bles out to the driveway to greet his g
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"The miniature DeLorean was original
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an eighth-scale Corvette model and per
we decided that wasn't going to work e
built our own model which turned out to
real DeLorean — about thirty-two inch
tographs we got from the existing stun
additional angles we photographed a
Lucasfilm employee named Charlene Go
involved in building the car — first of a
shape of the body and I laid everything
drawing. After the initial master of th
Wesley Seeds took that and made a rubb
as some epoxy glass pieces. He made to
cast up some tires that we used for a s
made a chassis of aluminum, put in an al
two stepper motors that operated the w
ally had two functions — they had to be
body as well rotating down. Mike Coch
ing for the chassis and wheels. The
machined out of aluminum stock. We had
halogen lights in each wheel to simi
motors, and those generated heat so th
sinks. The wheels were also capable of ro
unfortunately we never got to show them in
we made giant skates, like the old steel s



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